

MEMORANDUM

TO: All personnel, Division of Water Rights

FROM: S. Bryce Montgomery, Area Engineer

RE: Emigration Canyon

On September 23, 1968, at 3:00 pm the State Engineer held a public meeting in the Water Conference Room, Utah State Capitol Building, concerning the further appropriation of water in Emigration Canyon, Salt Lake County.

Besides the State Engineer, Hubert C. Lambert, present and conducting the meeting, there were present his Appropriations Directing Engineer and Area Office Engineer and approximately 60 Emigration Canyon water users and land owners or their representatives.

Following a general statement by the State Engineer of the purpose of the meeting, S. Bryce Montgomery, Area Engineer, presented the water-budget picture and figures for Emigration Canyon as to current data, the summary of which is as follows:

Total Average Annual Precipitation (1931-60):

Isohyetal data taken from U.S.W.B. Water - Supply Forecast Unit

Drainage area in acres	Total 11,904
120 acs. above 40 in. precipitation	396 a.f.
1260 acs. bet. 35-40 in. precipitation	3,931 a.f.
2200 acs. bet. 30-35 in. precipitation	5,940 a.f.
7800 acs. bet. 25-30 in. precipitation	17,862 a.f.
3540 acs. bet. 20-25 in. precipitation	6,655 a.f.

Evapo - Transpiration of Watershed Plants

Mainly oakbrush, some aspen, conifers and sagebrush-grass. Average consumptive use based on 19 inches per year as per Forest Service experimental data elsewhere in state:

(1.58 ft.) (11,900 acs.) = 18,802 a.f. total

Stream Discharge (Ave. 1901 - 1967): 4327 a.f.

Return Flow From Uses Upstream:

(Septic tanks and Irrigation) = not measurable

Water Filings

Decree dated August 11, 1923

Full Stream year round (fraction
of 4327 a.f. average beneficially
used.)

Diligence Claims & perfected applications - - - - -	5122.36 a.f.
Approved, but unperfected applications - - - - -	3620.19 a.f.
	<u>8742.55 a.f. plus</u>
	Decreed Stream

Filed applications not approved - - - - - 43.28 a.f.

Differences:

34,784 a.f.	Total Annual Precipitation (Average 1931-60).
less 18,802 a.f.	Evapo-transpiration of plants on watershed.
15,982 a.f.	
less 4,327 a.f.	Stream discharge (includes Decreed rights and part of 3500 a.f. approved application for Little Dell Project).
11,655 a.f.	
less 5,122 a.f.	Diligence Rights & Perfected Applications.
6,533 a.f.	
less 3,620 a.f.	Approved, but unperfected applications. (Includes 3500 a.f. for Little Dell Project, part of which would be early spring, stream discharge).
2,913 a.f.	
less ? amount a.f.	Underground outflow from the Canyon not measurable. This underground water is the recharge in part to well rights and drains in the Jordan Valley located out from the mouth of Emigration Canyon.
less 43.28 a.f.	of filed applications not approved.

Net Difference to be considered for further appropriations is minimum if
any, depending upon the amount of underground water flow from the canyon
and extent of beneficial use of the natural stream flow under Decreed rights.

TABLE 1. Emigration Creek discharge at the gage near Hogle Zoo. Data from unpublished records of the Department of Water Supply and Waterworks, Salt Lake City, Utah

Year	Annual flow in acre-feet	Year	Annual flow in acre-feet	Year	Annual flow in acre-feet
1901	2,320	1923	6,020	1945	2,640
1902	2,050	1924	2,300	1946	2,360
1903	2,310	1925	3,010	1947	3,950
1904	4,540	1926	3,620	1948	4,720
1905	1,740	1927	4,520	1949	5,460
1906	3,390	1928	4,770	1950	6,260
1907	5,950	1929	6,090	1951	4,748
1908	3,370	1930	1,940	1952	11,327
1909	10,700	1931	1,190	1953	6,037
1910	13,500	1932	3,560	1954	1,305
1911	1,750	1933	3,320	1955	1,720
1912	4,490	1934	681	1956	2,284
1913	5,740	1935	1,700	1957	4,518
1914	5,110	1936	6,310	1958	6,528
1915	2,340	1937	4,600	1959	1,508
1916	3,910	1938	4,400	1960	2,079
1917	6,610	1939	2,940	1961	234
1918	3,650	1940	2,660	1962	2,675
1919	3,050	1941	3,660	1963	1,891
1920	6,350	1942	6,190	1964	5,416
1921	12,300	1943	3,240	1965	8,355
1922	11,500	1944	3,080		

Total of 65 years of runoff-----281,832 acre-feet
Average annual runoff-----4,336 acre-feet
Lowest annual runoff-----234 acre-feet (1961)
Highest annual runoff-----13,500 acre feet (1910)

Elevation of gage-----4,870 feet
Drainage area-----19 square miles

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Donald G. Stewart, Appropriations Directing Engineer then presented some of the existing problems in the canyon area such as pollution of the stream and wells from human waste, and the potential of interference through the approval of any large flow rate wells in the canyon. He further referred to a study made in 1966 by Mr. Jack Barnett of this office regarding the Hydrology of Emigration Canyon and his resultant recommendations. Mr. Stewart further pointed out that for the last few years only wells for 0.015 sec.-ft. flow rate for one family have been approved in the Emigration Canyon area.

Mr. Hubert C. Lambert, State Engineer, then further commented and summarized the existing problems of pollution and interference of prior water rights in Emigration Canyon. In conclusion of present data and conditions, Mr. Lambert issued the policy that as of the beginning of the meeting no further applications filed to appropriate water in Emigration Canyon area would be approved by the State Engineer. Furthermore, only those pending unapproved applications on file for 0.015 sec.-ft. or less for the domestic purposes of one family, stockwatering and the irrigation of 0.25 acre or less would be approved.

Mr. Lambert stated that this policy would remain in affect until additional or different data was gathered that would merit a change of the policy, and then no change would be made except at a public meeting such as this.

The State Engineer clarified that under the State Water Law existing rights in the canyon area could be transferred and by proper filing of a change application and its approval, the water right or fraction thereof could be changed as to point of diversion, place or nature of use.